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## US5996006: Internet-audiotext electronic advertising system with enhanced matching and notification

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**Abstract:** The present invention relates to an electronic advertising system. More specifically, the present invention provides a computer based matching system that is significantly more convenient for the advertiser. In the present invention, when a person places a personal ad on the system, either via a telephone or via the Internet, the person creates a personal profile of himself by answering questions about himself and the type of person he wishes to meet. At the conclusion of the ad taking process, the system automatically finds other advertisers (whether they placed their ad via audiotext or the Internet) that match the new advertiser's profile, and the system gives the new advertiser information on how to contact his matches. Conversely, the system notifies existing advertisers when a new ad is placed that matches their profile. The system also assists users by automatically finding ads similar to those to which users respond.

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by automatically matching ads similar to those to which users respond. Finally, the system assists advertisers by automatically notifying an advertiser when a response is left to his ad.

Attorney, Agent, or  
Firm:  
Primary/Assistant  
Examiners:

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**Rinehart; Mark H.;**

Related Applications:

Application Number	ApplDate	Patent	Issued	Title
US1996000744879	1996-11-08			

Family:

Patent	Issued	Filed	Title
<u>US6064967</u>	May 16, 2000	Feb. 12, 1997	Internet-audiotext electronic advertising system with inventory management
<b>US5996006</b>	Nov. 30, 1999	Feb. 12, 1997	Internet-audiotext electronic advertising system with enhanced matching and notification
2 family members shown above			

U.S. References:

(No patents reference this one)

Patent	Issued	Inventor(s)	Applicant(s)	Title
<u>US5283731</u>	2 /1994	Lalonde et al.	EC Corporation	<u>Computer-based classified ad system and method</u>
<u>US5729594</u>	3 /1998	Klingman		<u>On-line secured financial transaction system through electronic media</u>
<u>US5778187</u>	7 /1998	Monteiro et al.	Netcast Communications Corp.	<u>Multicasting method and apparatus</u>
<u>US5794210</u>	8 /1998	Goldhaber et al.	CyberGold, Inc.	<u>Attention brokerage</u>

CLAIMS:  
[Hide claims]:

What is claimed is:

1. A method for providing an electronic advertising system with matching, said method comprising the steps of:

- receiving input data via the Internet;
- storing said Internet input data;
- receiving an audio recording via the Internet;
- storing said audio recording;
- providing input data via a telephone;
- matching said Internet input data with said telephone input data; and
- playing said audio recording via a telephone;

- wherein said audio recording is received from an advertiser, wherein said audio recording is associated with said Internet input data; and wherein said audio recording describes an item or person available through said system.

2. A method for providing an electronic advertising system with matching according to claim 1, wherein said method further comprises the steps of:

- sending an audio response message via a telephone; and
- retrieving said audio response message via the Internet.

3. A method for providing an electronic advertising system with matching according to claim 1, wherein said method further comprises the step of:

- storing said telephone input data.

4. A method for providing an electronic advertising system with matching according to claim 1, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said telephone input data.

5. A method for providing an electronic advertising system with matching according to claim 4, wherein said method further comprises the steps of:

- receiving preference data; and
- storing said preference data;
- wherein said preference data includes a preferred time to send information or a preferred mode or modes to deliver information.

6. A method for providing an electronic advertising system with matching according to claim 4, wherein said providing notification is done via telephone.

7. A method for providing an electronic advertising system with matching according to claim 4, wherein said providing notification is done via the Internet.

8. A method for providing electronic advertising system with matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database via the Internet;
- receiving an audio recording via the Internet;
- storing said audio recording;
- playing said audio recording via a telephone;
- sending an audio response message via a telephone;
- isolating a subset of advertisements; and
- retrieving said audio response message via the Internet;
- wherein said audio recording is received from an advertiser;

wherein said audio recording is associated with said specific advertisement; wherein said audio recording describes an item or person available through said system; and wherein said subset comprises advertisements similar to said specific advertisement.

9. A method for providing an electronic advertising system with notification comprising the steps of:

- receiving an audio recording via the Internet;
- storing said audio recording;
- playing said audio recording via a telephone;
- sending an audio response message via a telephone; and
- providing notification of said audio response message;
- wherein said audio recording is received from an advertiser; and wherein said audio recording describes an item or person available through said system.

10. A computer based advertising system with matching, said system comprising:

- means for placing an advertisement;
- digital information storage device;
- publishing means;
- means for storing an audio recording via the Internet;
- means for outputting said audio recording via a telephone; and
- means to isolate a subset of a plurality of said advertisements;
- wherein said audio recording is associated with said advertisement; wherein said digital information storage device stores said advertisement as digital information; and wherein said publishing means formats said digital information for publication.

11. A computer based advertising system as defined in claim 10, wherein said system also comprises means for sending an audio response via a telephone which can be retrieved via the Internet.

12. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of data via a telephone;
- a second individual providing a second set of data via the Internet;
- matching said first set of data with said second set of data.

13. A telephone and Internet based matching system as defined in claim 12, wherein said method also comprises a means for sending an audio response via a telephone which can be retrieved via the Internet.

14. A telephone and Internet based matching system as defined in claim 13, wherein said method also comprises a means for sending a response via the Internet which can be retrieved via a telephone.

15. A telephone and Internet based matching system as defined in claim 12, wherein said method also comprises a means for

placing a text advertisement via the Internet which can be played via a telephone.

16. A telephone and Internet based matching system as is defined in claim 12, wherein said method also comprises a means for placing an audio recording via the Internet which can be played via a telephone.

17. A telephone and Internet based matching system as defined in claim 12, wherein said method also comprises a means for placing an audio recording via a telephone which can be played via the Internet.

18. A method for providing an electronic advertising system with matching comprising the steps of:

- receiving input data via the Internet;
- storing said Internet input data;
- placing a text advertisement via the Internet;
- storing said text advertisement;
- inputting input data via a telephone;
- matching said Internet input data with said telephone input data; and
- playing said text advertisement via a telephone;
- wherein said text advertisement is associated with said Internet input data.

19. A method for providing an electronic advertising system with matching according to claim 18, wherein said method further comprises the steps of:

- sending an audio response message via a telephone; and
- retrieving said audio response message via the Internet.

20. A method for providing an electronic advertising system with matching according to claim 18, wherein said method further comprises the step of:

- storing said telephone input data.

21. A method for providing an electronic advertising system with matching according to claim 20, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said telephone input data.

22. A method for providing an electronic advertising system with matching according to claim 21, wherein said method further comprises the steps of:

- receiving preference data; and
- storing said preference data;
- wherein said preference data includes a preferred time to send information or a preferred mode or modes to deliver information.

23. A method for providing an electronic advertising system with

matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database via the Internet;
- playing said specific advertisement via a telephone;
- sending an audio response message via a telephone;
- transferring said audio response message to an Internet access location; and
- isolating a subset of advertisements;
- wherein said subset comprises advertisements similar to said specific advertisement.

24. A method for providing an electronic advertising system with notification comprising the steps of:

- placing a text advertisement via the Internet;
- storing said text advertisement;
- playing said text advertisement via a telephone;
- sending an audio response message via a telephone;
- transferring said audio response message to an Internet access location; and
- providing notification of said audio response message.

25. A computer based advertising system with matching, said system comprising:

- means for placing an advertisement via the Internet;
- digital information storage device;
- publishing means;
- means for outputting said advertisement via a telephone; and
- means to isolate a subset of a plurality of said advertisements;
- wherein said digital information storage device stores said advertisement as digital information; and wherein said publishing means formats said digital information for publication.

26. A computer based advertising system as defined in claim 25, wherein said system also comprises means for sending an audio response via a telephone which can be retrieved via the Internet.

27. A method for providing an electronic advertising system with matching comprising the steps of:

- providing input data via a telephone;
- storing said telephone input data;
- placing an audio recording via a telephone;
- storing said audio recording;
- receiving input data via the Internet;
- matching said telephone input data with said Internet input data;
- transferring said audio recording to an Internet access location;

- receiving a response message via the Internet; and
- retrieving said response message via a telephone;
- wherein said audio recording is associated with said telephone input data; and wherein said audio recording describes an item or person available through said system.

28. A method for providing an electronic advertising system with matching according to claim 27, wherein said method further comprises the step of:

- storing said Internet input data.

29. A method for providing an electronic advertising system with matching according to claim 28, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said Internet input data.

30. A method for providing an electronic advertising system with matching according to claim 29, wherein said method further comprises the steps of:

- receiving preference data; and
- storing said preference data;
- wherein said preference data includes a preferred time to send information or a preferred mode or modes to deliver information.

31. A method for providing an electronic advertising system with matching according to claim 29, wherein said providing notification is done via telephone.

32. A method for providing an electronic advertising system with matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database;
- placing an audio recording via a telephone;
- storing said audio recording;
- transferring said audio recording to an Internet access location;
- receiving a response message via the Internet;
- retrieving said message via a telephone; and
- isolating a subset of advertisements;
- wherein said audio recording is associated with said specific advertisement; wherein said audio recording describes an item or person available through said system; and wherein said subset comprises advertisements similar to said specific advertisement.

33. A method for providing an electronic advertising system with notification comprising the steps of:

- placing an audio recording via a telephone;

- storing said audio recording;
- transferring said audio recording to an Internet access location;
- receiving a response message via the Internet;
- providing notification of said response message; and
- retrieving said response message via a telephone;
- wherein said audio recording describes an item or person available through said system.

34. A computer based advertising system with matching, said system comprising:

- means for placing an advertisement;
- digital information storage device;
- publishing means;
- means for placing an audio recording via a telephone;
- means for outputting said audio recording via the Internet; and
- means to isolate a subset of a plurality of said advertisements;
- wherein said audio recording is associated with said advertisement; wherein said digital information storage device stores said advertisement as digital information; and wherein said publishing means formats said digital information for publication.

35. A computer based advertising system as defined in claim 34, wherein said system also comprises a means for sending a response via the Internet which can be retrieved via a telephone.

36. A method for providing an electronic advertising system with matching comprising the steps of:

- receiving a first set of input data via the Internet;
- storing said first set of input data;
- receiving an audio recording via the Internet;
- storing said audio recording;
- receiving a second set of input data via the Internet;
- matching said first set of input data with said second set of input data; and
- playing said audio recording via the Internet;
- wherein said audio recording is received from an advertiser, wherein said audio recording is associated with said first set of input data; and wherein said audio recording describes an item or person available through said system.

37. A method for providing an electronic advertising system with matching according to claim 36, wherein said method further comprises the steps of:

- sending an audio response message via the Internet; and
- retrieving said audio response message via the Internet.

38. A method for providing an electronic advertising system with matching according to claim 36, wherein said method further comprises the steps of:



comprises the step of:

- storing said second set of input data.

39. A method for providing an electronic advertising system with matching according to claim 38, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said second set of input data.

40. A method for providing an electronic advertising system with matching according to claim 39, wherein said method further comprises the steps of:

- receiving preference data; and
- storing said preference data;
- wherein said preference data includes a preferred time to send information or a preferred mode or modes to deliver information.

41. A method for providing an electronic advertising system with matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database via the Internet;
- receiving an audio recording via the Internet;
- storing said audio recording;
- playing said audio recording via the Internet; and
- isolating a subset of advertisements;
- wherein said audio recording is received from an advertiser; wherein said audio recording is associated with said specific advertisement; wherein said audio recording describes an item or person available through said system; and wherein said subset comprises advertisements similar to said specific advertisement.

42. A method for providing an electronic advertising system with notification comprising the steps of:

- receiving an audio recording via the Internet;
- storing said audio recording;
- playing said audio recording via the Internet;
- receiving a response message via the Internet; and
- providing notification of said response message;
- wherein said audio recording is received from an advertiser; and wherein said audio recording describes an item or person available through said system.

43. A computer based advertising system with matching, said system comprising:

- means for placing an advertisement:

- digital information storage device;
- publishing means;
- means for storing an audio recording via the Internet;
- means for outputting said audio recording via the Internet;
- and
- means to isolate a subset of a plurality of said advertisements;
- wherein said audio recording is associated with said advertisement; wherein said digital information storage device stores said advertisement as digital information; and wherein said publishing means formats said digital information for publication.

44. A computer based advertising system as defined in claim 43, wherein said system also comprises a means for sending an audio response via the Internet which can be retrieved via the Internet.

45. A computer based advertising system as defined in claim 43, wherein said system also comprises a means for sending a text response via the Internet which can be retrieved via the Internet.

46. A computer based advertising system as defined in claim 43, wherein said system also comprises a means for sending a video response via the Internet which can be retrieved via the Internet.

47. A method for providing an electronic advertising system with matching comprising the steps of:

- receiving a first set of input data via the Internet;
- storing said first set of input data;
- receiving a video recording via the Internet;
- storing said video recording;
- receiving a second set of input data via the Internet;
- matching said first set of input data with said second set of input data; and
- playing said video recording via the Internet;
- wherein said video recording is received from an advertiser, wherein said video recording is associated with said first set of answer data; and wherein said video recording is of an item or person available through said system.

48. A method for providing an electronic advertising system with matching according to claim 47, wherein said method further comprises the steps of:

- receiving a response message via the Internet; and
- retrieving said response message via the Internet.

49. A method for providing an electronic advertising system with matching according to claim 47, wherein said method further comprises the step of:

- storing said second set of input data.

50. A method for providing an electronic advertising system with matching according to claim 49, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said second set of input data.

51. A method for providing an electronic advertising system with matching according to claim 49, wherein said method further comprises the steps of:

- receiving preference data; and
- storing said preference data;
- wherein said preference data includes a preferred time to send information or a preferred mode or modes to deliver information.

52. A method for providing an electronic advertising system with matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database via the Internet;
- receiving a video recording via the Internet;
- storing said video recording;
- playing said video recording via the Internet; and
- isolating a subset of advertisements;
- wherein said video recording is received from an advertiser; wherein said video recording is associated with said specific advertisement; wherein said video recording is of an item or person available through said system; and wherein said subset comprises advertisements similar to said specific advertisement.

53. A method for providing an electronic advertising system with notification comprising the steps of:

- receiving a video recording via the Internet;
- storing said video recording;
- playing said video recording via the Internet;
- receiving a response message via the Internet; and
- providing notification of said response message;
- wherein said video recording is received from an advertiser; and wherein said video recording is of an item or person available through said system.

54. A computer based advertising system with matching, said system comprising:

- means for placing an advertisement;
- digital information storage device;
- publishing means;
- means for storing a video recording;
- means for outputting said video recording via the Internet; and
- means to isolate a subset of a plurality of said advertisements;

- wherein said video recording is associated with said advertisement; wherein said digital information storage device stores said advertisement as digital information; and wherein said publishing means formats said digital information for publication.

55. A computer based advertising system as defined in claim 54, wherein said system also comprises means for sending an audio response via the Internet which can be retrieved via the Internet.

56. A computer based advertising system as defined in claim 54, wherein said system also comprises means for sending a text response via the Internet which can be retrieved via the Internet.

57. A computer based advertising system as defined in claim 54, wherein said system also comprises means for sending a video response via the Internet which can be retrieved via the Internet.

58. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of data via the Internet;
- a second individual providing a second set of data via the Internet; and
- matching said first set of preference with said second set of data;
- wherein said first individual sends a message via the Internet to said second individual which can be retrieved via a telephone.

59. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of data via the Internet;
- a second individual providing a second set of data via the Internet; and
- matching said first set of data with said second set of data;
- wherein said first individual sends a message via a telephone to said second individual which can be retrieved via the Internet.

60. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of data via the Internet;
- a second individual providing a second set of data via the Internet; and
- matching said first set of data with said second set of data;
- wherein said first individual sends an audio message to said second individual via the Internet which can be retrieved via the Internet.

61. A telephone and Internet based matching system comprising the steps of:

- is a first individual providing a first set of data via the Internet;
- a second individual providing a second set of data via the Internet; and
- matching said first set of data with said second set of data;

- wherein said first individual sends a video message to said second individual via the Internet which can be retrieved via the Internet.

62. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of data and an audio recording via the Internet;
- a second individual providing a second set of data via the Internet;
- matching said first set of data with said second set of data; and
- said second individual playing said audio recording via the Internet;
- wherein said audio recording is associated with said preference of said first individual; and wherein said audio recording describes an item or person available through said system.

63. A telephone and Internet based matching system comprising the steps of:

- a first individual providing a first set of input data and a video recording via the Internet;
- a second individual providing a second set of input data via the Internet;
- matching said first individual and said second individual based on said first set and second set of input data; and
- said second individual playing said video recording via the Internet;
- wherein said audio recording is associated with said preference of said first individual; and wherein said audio recording describes an item or person available through said system.

64. A method for providing an electronic advertising system with matching comprising the steps of:

- receiving input data via the Internet;
- storing said Internet input data;
- receiving a video recording via the Internet;
- storing said video recording;
- providing input data via a telephone;
- matching said Internet input data with said telephone input data;
- playing said the audio track of said video recording via a telephone;
- wherein said video recording is received from an advertiser, wherein said video recording is associated with said Internet answer data; and wherein said video recording is of an item or person available through said system.

65. A method for providing an electronic advertising system with matching according to claim 64, wherein said method further comprises the steps of:

comprises the steps of:

- sending an audio response message via a telephone; and
- transferring said audio response message to an Internet access location.

66. A method for providing an electronic advertising system with matching according to claim 64, wherein said method further comprises the step of:

- providing notification of advertisements subsequently available through said system that match said telephone input data.

67. A method for providing an electronic advertising system with matching comprising the steps of:

- creating a database of advertisements;
- placing a specific advertisement in said database via the Internet;
- receiving a video recording via the Internet;
- storing said video recording;
- playing said the audio track of said video recording via a telephone;
- sending an audio response message via a telephone;
- transferring said audio response message to an Internet access location; and
- isolating a subset of advertisements;
- wherein said video recording is received from an advertiser; wherein said video recording is associated with said specific advertisement; wherein said video recording is of an item or person available through said system; and wherein said subset comprises advertisements similar to said specific advertisement.

68. A method for providing an electronic advertising system with notification comprising the steps of:

- receiving a video recording via the Internet;
- storing said video recording;
- playing said the audio track of said video recording via a telephone;
- sending an audio response message via a telephone;
- transferring said audio response message to an Internet access location; and
- providing notification of said audio response message;
- wherein said video recording is received from an advertiser; and wherein said video recording is of an item or person available through said system.

This application is a continuation-in-part of application Ser. No. 08/744,879, filed Nov. 8, 1996.

Background/Summary:

TECHNICAL FIELD OF THE INVENTION

The present invention relates to audiotext systems designed to provide full access to traditional databases and telecommunications systems, such as local area networks, the Internet, other, external databases, telephones and fax machines, etc., and more specifically to audiotext personal ad services.

BACKGROUND OF THE INVENTION

Audiotext personal ad services are a popular way for people to meet, and are available in most newspapers and on many cable television systems. In a typical service, an advertiser calls a live operator and places a text personal ad. An advertiser then calls an audiotext system and records an audio message, often referred to as a greeting, which expands upon the advertiser's text ad by describing in more detail the advertiser and the type of person he is seeking. Personal ads are then published in a newspaper. A personal ad includes a 900 telephone number and an ad mailbox number permitting a caller to listen to an advertiser's voice greeting. A caller can respond to an ad by recording a reply voice mail message for the advertiser. An advertiser retrieves a message by calling the audiotext system and entering a password given at the time of ad placement. In another format, live operators are not used. Instead, an advertiser first records an audio greeting via telephone. An operator then listens to the audio greeting off-line and writes a text summary of the audio greeting for publication in the newspaper.

With the expansion of the Internet and other on-line services, personal ad services have been created to take advantage of this new medium. A typical service allows an advertiser to place a text personal ad that is published on the Internet on an HTML (HyperText Markup Language) page. An Internet user may respond to a personal ad by sending an advertiser a message via electronic mail. The limitation of this approach is that an Internet user cannot listen to an audio recording of an advertiser, a feature that is the central to audiotext personal ad services. Another limitation is that telephone users cannot exchange messages with Internet users. Another limitation is that many people do not have Internet access, thus limiting the number of advertisers and respondents.

In another format, an attempt is made to integrate audiotext personal ads services with the Internet. Using this approach, a newspaper publishes personal ads in both the newspaper and on the Internet. Each personal ad includes a 900 telephone number and an ad mailbox number permitting a caller to listen to an advertiser's voice greeting. This approach still has the disadvantage of not allowing an Internet user to listen to an advertiser's voice greeting via the Internet. Moreover, an Internet user can only respond to a personal ad via a telephone.

To summarize, existing Internet personal ad services are limited in that they lack many of the features available on audiotext personal ad services. Also, existing personal ad services do not provide a means for those using an audiotext personal ad service to effectively communicate with those using an Internet personal ad service and visa versa. Therefore, there is a need for a personal ad system that seamlessly integrates an audiotext system with an Internet server, allowing straightforward communication between those using a telephone and those on the Internet. Such a system has been proposed in detail by the present inventor which comprises U.S. application Ser. No. 08/744,879. However, there is still the need to address some of the problems inherent in an integrated audiotext and Internet based personal ad service.

A basic problem is that when a person places an ad, he must wait for his ad to be published and then for someone to respond to it in order to meet someone. A second problem is that if an advertiser wants to meet someone by responding to other personal ads, he must scan a large number of ads to identify a relatively small number of ads that meet his criteria. In addition, if an advertiser does not locate a suitable ad on a given day, the advertiser must in general do a complete search on the following day, since ads are generally not segregated based upon whether they have been newly placed. Moreover, since new ads can be placed both via an audiotext system and via the Internet, the advertiser might need to scan both the audiotext system and the Internet to find new ads. Finally, advertisers are not notified when they receive a response to their ad, thus requiring advertisers to check their mailbox frequently so as not to miss a message.

### SUMMARY OF THE INVENTION

The present invention provides a computer based matching system that is significantly more convenient for the advertiser. In the present invention, when a person places a personal ad on the system, whether via telephone or via the Internet, he creates a personal profile of himself by answering questions about himself and the type of person he wishes to meet. At the conclusion of the ad taking process, the system automatically finds other advertisers (whether they placed their ad via audiotext or the Internet) that match the new advertiser's profile, and the system gives the new advertiser information on how to contact his matches. In addition, during the ad taking process, a person is asked to input a telephone number and an e-mail address. Thereafter, any time a new personal ad comes on to the system that matches the person's profile (whether the ad originates on the audiotext system or on the Internet), the person is notified of the new ad and given instructions of how to contact the new match. Also, each time a person responds to a personal ad, the system automatically finds and presents other personal ads with similar characteristics to save the user time in finding an appealing ad. Finally, each time someone responds to a personal ad, the advertiser is automatically notified both via telephone and via electronic mail.

The significant advantages provided by the present invention are apparent from the above description. The system of the present invention does not require the advertiser to scan large numbers of ads, or to repeatedly scan for new ads. In addition, new advertisers can meet someone faster because they are automatically matched with other advertisers at the time of ad placement and notified when someone responds to their ad.

### Drawing Descriptions:

### BRIEF DESCRIPTION OF DRAWINGS

For a more complete understanding of the present invention, reference is made to the following drawings, in which:

FIG. 1 shows a schematic representation of the present invention.

FIG. 2 shows a table of the fields used for storing personal data, including a brief description of the particular fields.

FIG. 3 shows a table of the fields used for storing greetings data, including a brief description of the particular fields.

FIG. 4 shows a table of the fields used for storing response data, including a brief description of the particular fields.

FIG. 5 shows a flow diagram of an exemplary operation of the present invention, more specifically placing an ad through a telephone.



FIG. 6 shows a flow diagram of an exemplary operation of the present invention, more specifically placing an ad through the Internet.

FIG. 7 shows a flow diagram of an exemplary operation of the process of notifying an existing advertiser of new matches as accomplished by the present invention.

FIG. 8 shows a flow diagram of an exemplary operation of the process of advertiser matching through a telephone as accomplished by the present invention.

FIG. 9 shows a flow diagram of an exemplary operation of the process of advertiser matching through the Internet as accomplished by the present invention.

FIG. 10 shows a flow diagram of an exemplary operation of the process of reviewing and summarizing ads as accomplished by the present invention.

FIG. 11 shows personal ads as they would appear in a local newspaper.

FIG. 12 shows a flow diagram of an exemplary operation of the process of responding to an ad through a telephone as accomplished by the present invention.

FIG. 13 shows a flow diagram of an exemplary operation of the process of responding to an ad through the Internet as accomplished by the present invention.

FIG. 14 shows a maximized personal ad as seen by the Internet user who chooses to expand the ad to full-page size.

FIG. 15 shows a flow diagram of the response confirmation process, including the Response Confirmation Form which gives the Internet user instructions on how to enhance a response to an ad with, audio, video or a photograph.

FIG. 16 shows a flow diagram of an exemplary operation of the process of notifying an advertiser of a response as accomplished by the present invention.

FIG. 17 shows a flow diagram of an exemplary operation of the process of retrieving responses through a telephone as accomplished by the present invention.

FIG. 18 shows a flow diagram of an exemplary operation of the process of retrieving responses through the Internet as accomplished by the present invention.

Description of  
Preferred  
Embodiments:

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

As required, a detailed illustrative embodiment of the present invention is disclosed herein. However, telephone techniques, physical communication systems, data formats and operating structures in accordance with the present invention may be embodied in a wide variety of forms and modes, some of which may be quite different from those in the disclosed embodiment. Consequently, the specific structural and functional details disclosed herein are merely representative, yet in that regard, they are deemed to afford the best embodiment for purposes of disclosure and to provide a basis for the claims herein which define the scope of the present invention.

Referring initially to FIG. 1, a series of remote telephone terminals T1-Tn are represented. In addition, a series of remote computer terminals CT1-CTn are represented. The indicated terminals T1-Tn represent the multitude of telephone terminals existing in association with the public telephone network PTN. The indicated computer terminals CT1-CTn represent the multitude of computer terminals connected to the Internet.

The public telephone network PTN, which accommodates the individual terminals T1-Tn, is coupled to an Interactive Voice Response System IVR. The Internet, which accommodates

individual computer terminals CT1-CTn, is coupled to an Internet Web Server IWS. Individual callers use the individual telephone stations T1 through Tn to interface the IVR through the public telephone network PTN. Individual users at computer terminals CT1 through CTn use the Internet to interface the Internet Web Server. Telephone callers and Internet users may record digital audio messages that can be listened to from any of the remote telephone terminals T1-Tn or from any of the remote computer terminals CT1-CTn. Internet users may leave digital text messages that may be accessed from any of the remote telephone terminals T1-Tn using text to speech or from the remote computer terminals CT1-CTn via computer monitor.

Considering the system of FIG. 1 in somewhat greater detail, it is to be understood that the public telephone network has multiplexing capability for individually coupling the terminals T1-Tn to the IVR on request. In the illustrative embodiment of the system, the individual terminals T1-Tn take the form of existing traditional or conventional telephone instruments. It is also to be understood that the Internet has the capability for individually connecting the computer terminals CT1-CTn to the Internet Web Server. In the illustrative embodiment of the system, the individual computer terminals CT1-CTn take the form of personal computers that comprise a central processing unit CPU, modem, monitor, keyboard, hard drive, sound card, speakers, and microphone.

Considering the IVR in somewhat greater detail, the public telephone network PTN is coupled to an IVR FIG. 1. In the disclosed embodiment, from the public telephone network PTN, forty-eight lines are connected to the IVR and, accordingly, the IVR may accommodate up to forty-eight simultaneous calls from the public telephone network PTN. The IVR contains a processor, an exemplary form of which is an Intel 166 MHz Pentium Processor. The forty-eight lines from the public telephone network (PTN) are connected to the processor through an interface 15, an exemplary form of which is a series of commercially available Dialogic (D240SC-T1) cards. The interface incorporates modems, tone decoders, switching mechanisms, DNIS and ANI capability. The Dialogic card stores audio information in the Dialogic .VOX format.

Generally, DNIS capability is a function of the public telephone network PTN to provide digital data indicating the called number. ANI capability is a similar function whereby the digital data indicates the calling number.

Considering the Internet Web Server in somewhat greater detail, the IWS is coupled to the Internet via a DS1 line to a local Internet provider service. The IWS may accommodate a multitude of simultaneous Internet users. As represented, the IWS is a micro computer programmed for Internet information server operations. The IWS contains a processor and Internet server software, exemplary forms of which are an Intel 166 Mhz Pentium Processor and Microsoft Internet Information Server software.

The IWS is also loaded with RealAudio Server software from Progressive Network. RealAudio allows a Microsoft Windows .WAV files to be converted into a RealAudio .RA file, a compressed format that allows play back over the Internet in real time, as opposed to first downloading a file and then listening to it. RealAudio accomplishes this by playing an audio file while it is still downloading, using a process called data streaming.

The IWS is also loaded with VDOLive Server software. VDOLive allows a video clip in the Microsoft Windows AVI, Apple Quicktime, or MPEG video file formats to be converted into a VDOLive .VDO format, a compressed format that allows play back over the Internet in real time, as opposed to first downloading a file and then listening to it. VDOLive also utilizes data streaming.

The IVR and the IWS are coupled to a Database Server DBS via an Ethernet hub as shown in FIG. 1. The system includes one or more Operator Workstations OW1-OWn, through which an operator can interact with and control the DBS, IVR and IWS.

The database server DBS is a computer programmed for database operations. In the illustrated embodiment, the DBS manages a personal Ad Database which is comprised of multiple tables that manage ad creation, the audio greeting files, ad response files, photograph and video files. The Ad Database comprises an electronic equivalent of the personal classified ads placed via telephone and the Internet, and responses placed to ads.

The IVR converts audio files received via telephone into the RealAudio RA format for real time retrieval via the Internet. Conversely, the IWS converts audio files received via the Internet into Dialogic .VOX files for retrieval via telephone. Audio file conversions are done through audio file conversion software, a exemplary form of which is Sound Forge by Sonic Foundry.

The DBS contains a processor and an SQL (Structured Query Language) relational database software, exemplary forms of which are the Intel 166 Mhz Pentium Processor and Microsoft SQL Server.

The Operator Workstation (OW) is a conventional personal computer equipped with a sound card capable of playing the audio data and a video display capable of displaying digitally stored photographs and videos. An exemplary form of the OW is a microcomputer equipped with an Intel 166 Mhz Pentium Processor and a Creative Labs Sound Blaster sound card. Operators review all incoming advertiser files--text, audio, photograph, and video--to insure that their content is appropriate. Also, operators to create text ads for publication in a newspaper.

The following sections describe in greater detail the interaction between the IVR, the DBS, the IWS, and the OW.

#### PLACING AN AD THROUGH A TELEPHONE

An exemplary operation of the system, with regard to a specific telephone caller placing a personal advertisement will now be treated to accomplish the process as indicated in FIG. 5. First, suppose a telephone caller at terminal T1 makes a call to place a personal advertisement in response to an advertisement in XYZ newspaper. The assumed call involves the telephone caller actuating the buttons to input the number 1 800 555 3333, for example. As a result, signals are provided to the public telephone network resulting in a connection from the remote terminal T1 to the IVR. Using standard DNIS techniques, the IVR associates the called number 1 800 555 3333 with a specific format, for example, a voice personals ad taking format.

The caller is first prompted to create a profile of himself by answering a series of questions using the buttons on his touch tone phone. The profile contains data on the advertiser and the type of person the advertiser wishes to meet. Referring initially to FIG. 5, upon receiving a call, the IVR cues the caller to enter his telephone number 801. The IVR stores the telephone number 802 in the field AD\_PHONE 203. Next, the IVR cues the caller to enter his gender 803. For example: "If you are a woman, press 1. If you are a man, press 2." The IVR stores the caller's gender 804 in the field AD\_GENDER 207. Next, the IVR cues the caller for his marital status 805. For example: "If you are single, press 1. If you are divorced, press 2. If you are widowed, press 3." The caller responds and the IVR stores the caller's marital status 806 in the field AD\_MARITAL\_

STATUS 208. Next, the IVR cues the caller for his age 807. For example: "Please enter your age." The caller's age is then stored 808 in the field AD\_ AGE 209.

Next, the caller is prompted to indicate the type of person he wishes to meet. The IVR first cues the caller for the marital status of the person he is seeking 825. For example: "If you wish to meet someone who is single, press 1. If you wish to meet someone who is divorced, press 2. If you wish to meet someone who is widowed, press 3." The marital status sought is then stored 826 in the field AD\_ MARITAL\_ SOUGHT 212. Next, the IVR cues the caller to enter the lowest age of the person he wishes to meet 827. For example: "Please enter the lowest age of the person you wish to meet." The low age sought is then stored 828 in the field LOW\_ AGE\_ SOUGHT 213. Finally, the IVR cues the caller to enter the highest age of the person he wishes to meet 829. For example: "Please enter the highest age of the person you wish to meet." The high age sought is then stored 830 in the field HIGH\_ AGE\_ SOUGHT 214. It is to be understood that the actual questions asked about the caller and the person he is seeking are merely illustrative. The actual questions could vary greatly in both number and kind.

Next, the IVR cues the caller to record an audio greeting 812. The advertiser's audio greeting is then stored to a disk file on the IVR 813 and the Ad Database is updated 809. Specifically, the AD\_ REVIEW\_ FLAG 210 in the AD\_ PERSONAL\_ TABLE FIG. 2 is set to FALSE indicating that the ad must be reviewed by an operator. In addition, a new record is created in the AD\_ GREETINGS\_ TABLE FIG. 3 and the field GR\_ REVIEW\_ FLAG 303 set to FALSE to indicate that the audio greeting has not been reviewed. In the new record, the fields GR\_ MAILBOX\_ NUMBER 301, GR\_ TYPE 302, GR\_ FILENAME 304, GR\_ DATE\_ TIME 305 in the table AD\_ GREETINGS FIG. 3 are also populated to indicate the advertiser's mailbox number, the format of the audio file, and the location of the audio file on the IVR, and the date and time the greeting was recorded. The field GR\_ TYPE is set to VOX to indicate that the audio recording is in the Dialogic .VOX file format. Finally, the field GR\_ CONVERSION\_ FLAG 306 is set to FALSE to indicate that the audio file must be converted from the Dialogic .VOX format to create a new audio file in the RealAudio .RA format for playback on the Internet.

The IVR then cues the caller to indicate if he wishes to record an e-mail address 816. For example: "Press 1 to input an e-mail address. Press 2 to decline." If the caller elects to leave an e-mail address, the IVR cues the caller to record his e-mail address 817. The audio recording is stored to a disk file on the IVR 818 and the field AD\_ EMAIL\_ FILENAME 205 in table AD PERSONAL FIG. 2 is set, indicating that an e-mail audio file exists and its location on the IVR.

Next, the IVR assigns the advertiser a five digit mailbox number 819. For example: "Your 5-digit mailbox number is 12345." The mailbox number is then stored 820 in the field AD\_ MAILBOX\_ NUMBER 201. The IVR then cues the caller to enter a five digit password 821. The password is stored 822 in the field AD\_ PASSWORD 202.

In addition, the IVR stores the date the ad is taken in the field AD\_ DATE\_ TIME 206, and updates the field AD\_ ORIGIN 211 to indicate that the personal ad originated on the telephone 823.

Finally, the IVR creates an electronic mailbox for the advertiser on

Finally, the IVR creates an electronic mailbox for the advertiser on the IWS 824, using the mailbox number stored in the field AD\_ MAILBOX\_ NUMBER 201 as the electronic mailbox address, to allow respondents to submit audio, video and photographic files in response to the advertiser's ad.

Finally, the IVR queries the Ad Database to determine if there are other existing advertiser's whose profile matches that of the new advertiser 831. More specifically, there is a match if the values in the field AD\_ MARITAL\_ STATUS 208 and the values in the field AD\_ MARITAL SOUGHT 212 match for each ad, and if the value in the field AD\_ AGE 209 for each ad is within the range of values in the fields AD\_ LOW\_ AGE\_ SOUGHT 213 and AD\_ HIGH\_ AGE\_ SOUGHT 214 for the other ad. If the query finds one or more ads that match, the IVR speaks the number of matching ads to the caller 832. For example: "The number of ads that match your preferences is 5." The caller is then given both a 900 number 833 and an Internet address 834 that can be used to retrieve the matches, and the call is terminated 835. If no matches are found, the call is terminated 835.

In addition, the mailbox numbers of matching ads are placed in a notification queue 836, together with delivery information corresponding to the matching ad so that the existing advertisers can be notified that a new personal ad has come onto the system that matches the existing advertisers' profile. The delivery information includes the telephone number and e-mail address, if available, of the existing advertiser to be notified, together with mailbox number of the new ad coming onto the system.

#### PLACING AN AD THROUGH THE INTERNET

An exemplary operation of the system, with regard to a specific Internet user placing a personal advertisement will now be treated to accomplish the process as indicated in FIG. 6. First, suppose a Internet user at terminal CT1 connects to the Internet to place a personal advertisement in response to an advertisement in XYZ newspaper. The assumed Internet user connects to the Internet and inputs a Uniform Reference Locator URL, for example: [http://www.personal\\_ads.com](http://www.personal_ads.com), resulting in a connection from the remote terminal CT1 to a Home Page 1001 on the Internet Web Server.

Referring to FIG. 6, from the Home Page 1001 on the IWS, the Internet user selects an Ad Placement Form 1002. The Ad Placement Form 1002 contains the following input fields corresponding to fields in the Ad Database as indicated:

---

```

Gender 1003 AD_ GENDER 207
Marital Status 1004
  AD_ MARITAL_ STATUS 208
Age 1005 AD_ AGE 209
Marital Sought 1034
  AD_ MARTIAL_ SOUGHT 212
Low Age Sought 1035
  AD_ LOW_ AGE_ SOUGHT 213
High Age Sought 1036
  AD_ HIGH_ AGE_ SOUGHT 214
E-mail address 1006
  AD_ EMAIL_ ADDRESS 204
Phone Number 1007
  AD_ PHONE 203
Password 1008 AD_ PASSWORD 202
Greeting Text 1014

```

GR\_\_ FILENAME 304

This process largely parallels the process of placing a personal ad via a telephone. The password 1008 is used by the advertiser to retrieve messages and the e-mail address 1006 and telephone number 1007 are used to contact the advertiser. The gender 1003, age 1005, and marital status 1004 fields create a profile of the advertiser. The marital sought 1034, low age sought 1035 and high age sought 1036 fields complete the advertiser's profile by indicating the type of person the advertiser wishes to meet. Finally, the field Greeting Text 1014 comprises the advertiser's text personal ad.

The Internet user completes the Ad Placement Form 1002 and presses the "Submit" button to submit her ad. The form is checked by the IWS for completeness 1016. If the form is incomplete, the user is returned to the Ad Placement Form 1002. If the form is complete, the IWS updates the Ad Database 1017. This includes assigning the user a five digit mailbox number and storing it in the field AD\_ MAILBOX\_ NUMBER 201. In addition, the advertiser's profile, contact information, password and greeting are added to the Ad Database. Also, the advertiser's text greeting is stored to a disk file on the IWS. Next, the AD\_ REVIEW\_ FLAG 210 in the AD\_ PERSONAL\_ TABLE FIG. 2 is set to FALSE indicating that the ad must be reviewed by an operator, a new record is created in the AD\_ \_ GREETINGS\_ TABLE FIG. 3, and the field GR\_ REVIEW\_ FLAG 303 is set to FALSE to indicate that the text greeting has not been reviewed. In the new record, the fields GR\_ MAILBOX\_ NUMBER 301, GR\_ TYPE 302, GR\_ FILENAME 304, GR\_ DATE\_ TIME 305 in the table AD\_ GREETINGS FIG. 3 are also populated to indicate the advertiser's mailbox number, the file format, and the location of the text file on the IWS, and the date and time the greeting was placed. Specifically, the field GR\_ TYPE is set to TEXT. Finally, the field GR\_ CONVERSION\_ FLAG is set to TRUE to indicate that the text does not need to be converted to a different format.

Next, the IWS queries the Ad Database to determine if there are other existing advertiser's whose profile matches that of the new advertiser 1018. The IWS then creates an Ad Confirmation Page 1020. If the query finds one or more ads that match, the Ad Confirmation Page displays a text message of the number of matching ads 1027. The text message is displayed as a link which can be followed by a browser to the actual matching ads. In addition, the Ad Confirmation Page 1020 confirms the advertiser's mailbox number 1021, and gives the advertiser instructions on how to include an audio greeting 1022, photograph 1023, or video clip 1024 with her personal ad. Also, the IWS stores the date and time the ad is taken in the field AD\_ DATE\_ TIME 206, and updates the field AD\_ \_ ORIGIN 211 to indicate that the personal ad originated on the Internet 1025. Finally, the IWS creates an electronic mailbox for the advertiser 1026, using the mailbox number stored in the field AD\_ MAILBOX\_ NUMBER as the electronic mail address, to allow respondents to submit audio, video and photographic files in response to the advertiser's ad.

In addition, the mailbox numbers of matching ads are placed in a notification queue 1038, together with delivery information corresponding to the matching ad so that the existing advertisers can be notified that a new personal ad has come onto the system that matches the existing advertisers' profile. The delivery

information includes the telephone number and e-mail address, if available, of the existing advertiser to be notified, together with the mailbox number of the new ad coming onto the system.

#### ENHANCING AN INTERNET AD WITH AUDIO, PHOTOGRAPH AND VIDEO

A more detailed explanation of how an advertiser submits an audio greeting, photograph, or video clip via CT1 will now be given. To submit an audio greeting, the advertiser first makes an audio recording using a WAV file editor and then saves the file using her five digit mailbox number as the file name 1030 FIG. 6, for example: 44567.wav. The advertiser then submits the audio file using e-mail to an audio greeting electronic mailbox 1031, for example: audio\_greeting@personals.com. The advertiser's audio recording is stored to a disk file on the IWS.

In addition, a new record is created in the AD\_GREETINGS\_TABLE FIG. 3 and the Ad Database is updated 1032. Specifically, the field GR\_REVIEW\_FLAG 303 is set to FALSE to indicate that the audio greeting has not been reviewed. Also, the fields GR\_MAILBOX\_NUMBER 301, GR\_TYPE 302, GR\_FILENAME 304, GR\_DATE\_TIME 305 in the AD\_GREETINGS\_TABLE FIG. 3 are populated to indicate the advertiser's mailbox number, the format of the audio file, and the location of the audio file on the IWS, and the date and time the greeting placed. The field GR\_TYPE is set to WAV to indicate that the audio recording is in the Microsoft .WAV file format. Finally, the field GR\_CONVERSION\_FLAG is set to FALSE to indicate that the audio file must be converted from the Microsoft .WAV format to create two new audio files: one in the RealAudio .RA format for playback on the Internet, and another in the Dialogic .VOX format for playback via the telephone.

To enhance a personal ad with a photograph, the advertiser first digitizes a photograph using a scanner or takes a photograph with a digital camera and then saves the image to a .GIF file using her five digit mailbox number as the file name 1037, for example: 44567.gif. The advertiser then submits the graphic file using e-mail to an photograph electronic mailbox, for example: photo@personals.com 1031.

The advertiser's photo is stored to a disk file on the IWS and the Ad Database is updated 1032. Specifically, a new record is created in the AD\_GREETINGS\_TABLE FIG. 3 and the field GR\_REVIEW\_FLAG 303 set to FALSE to indicate that the graphic file has not been reviewed. In each new record, the fields GR\_MAILBOX\_NUMBER 301, GR\_TYPE 302, GR\_FILENAME 304, GR\_DATE\_TIME 305 in the table AD\_GREETINGS FIG. 3 are also populated to indicate the advertiser's mailbox number, the format of the graphic file, and the location of the graphic file on the IWS, and the date and time the photograph was received. The field GR\_TYPE 302 is set to GIF to indicate that the graphic file is in the .GIF file format. Finally, the field GR\_CONVERSION\_FLAG 306 is set to TRUE to indicate that no file conversion is necessary as .GIF is the graphic file format used by the IWS. If other graphic formats were accepted, they might have to be converted to a .GIF format, depending on the file formats supported by the IWS. If file conversion were necessary, the field GR\_CONVERSION\_FLAG 306 would be set to FALSE.

To enhance a personal ad with video, the advertiser first digitizes

a video clip and then saves the image to a Microsoft .AVI file using her five digit mailbox number as the file name 1037, for example: 44567.avi. Other video formats such as Apple Quicktime, or MPEG video could also be used. The advertiser then submits the graphic file using e-mail to an electronic mailbox, for example: video@personals.com 1031.

The advertiser's video clip is stored to a disk file on the IWS and the Ad Database is updated 1032. Specifically, a new record is created in the AD\_ GREETINGS table FIG. 3 and the field GR\_ REVIEW\_ FLAG 303 set to FALSE to indicate that the video file has not been reviewed. In each new record, the fields GR\_ MAILBOX\_ NUMBER 301, GR\_ TYPE 302, GR\_ FILENAME 304, GR\_ DATE\_ TIME 305 in the table AD\_ GREETINGS FIG. 3 are populated to indicate the advertiser's mailbox number, the format of the video file, and the location of the video file on the IWS, and the date and time the video was received. Specifically, the field GR\_ TYPE 302 is set to AVI to indicate that the video clip is in the Microsoft .AVI file format. Finally, the field GR\_ CONVERSION\_ FLAG 306 is set to FALSE to indicate that the video file must be converted to the VDOLive format for real time playback on the Internet.

#### NOTIFYING AN EXISTING ADVERTISER OF NEW MATCHES

FIG. 7 illustrates the notification routine that processes the records placed in the notification queue in step 836 of FIG. 5 and step 1038 of FIG. 6. In step 7001, the DBS scans the notification queue to determine if any notifications are scheduled to be made at the present time. As previously described, each notification record includes the telephone number and e-mail address, if available, of the advertiser to be notified, together with the mailbox number of the new matching personal ad that has come onto the system. In step 7003, the DBS scans the notification record for an e-mail address. If an e-mail address is present, the DBS sends the record to the IWS 7004. In step 7005, the IWS sends an e-mail message to the advertiser informing him that a new ad has come onto the system that matches his profile. The e-mail message includes the mailbox number of the new ad. The mailbox number is also a link that can be followed to the actual ad for those retrieving their e-mail via a browser. Step 7006 sends the record to the IVR. In step 7007, the IVR dials an advertiser's telephone number contained in the callback record and waits for a response. If a voice response is not received, then the IVR sends a corresponding message to the DBS. The DBS then marks the time of the attempted callback in the notification queue record, so that a set period of time can be established between callback attempts. Note could also be made if an e-mail message had been sent to avoid sending duplicate notifications. If a voice response is received 7008, then, in step 7009, the IVR sends a voice message informing the person that a new ad has come onto the system that matches the person's profile. The voice message also gives a 900 number and Internet address that can be used to receive the match. It may be desirable in certain applications to prompt the person who answers the telephone for a password and mailbox number to verify their identity. Also, it may be desirable to actually allow the person to listen and respond to his match during the call.

#### ADVERTISER MATCHING VIA TELEPHONE

An exemplary operation of the system, with regard to an



advertiser retrieving personal ads that match his preferences will now be treated to accomplish the process as indicated in FIG. 8. First, suppose a telephone caller at terminal T1 places a call to retrieve matches after having placed a personal ad or after having been notified of the existence of a new personal ad that match his preferences. The assumed call involves the advertiser actuating the buttons to input the number 1 900 777 4444, for example. As a result, signals are provided to the public telephone network resulting in a connection from the remote terminal T1 to the IVR. Using standard DNIS techniques, the IVR associates the called number 1 900 777 4444 with a specific format, for example, a match retrieval format.

Referring to FIG. 8, upon receiving a call, the IVR sets the "logon attempts" equal to zero 8001. The IVR then increments the "logon attempts" by one 8002 and cues the caller for a mailbox number and password 8003. The IVR then queries the Ad Database to determine if the mailbox number and password are valid. If the entries are not valid, the IVR determines if the caller has exceeded the maximum number of logons attempts allowed 8005. If the caller has exceeded the maximum number of logon attempts allowed, the call is terminated 8006. If the maximum number of logon attempts allowed has not been exceeded, the IVR increments the "logon attempts" by one 8002 and again cues the caller for a mailbox number and password 8003.

If the entries are valid, the IVR then queries the Ad Database for existing ads whose profile matches that of the caller 8008. If there are no matches, the call is terminated 8006. If the IVR finds a match, the IVR plays the greeting of the matching ad 8009. If the greeting is in text form, the IVR uses text to speech to play the message. The IVR then prompts the caller to indicate if he wishes to respond to the ad 8010.

If the caller elects not to respond to the ad and there are no additional matches, the call is terminated 8015. If the caller elects not to respond to the ad and there are additional matches, the caller is returned to block 8009.

If the caller elects to respond to the ad, the IVR next cues him to record his response 8011. The IVR then stores the response to a disk file 8012 and updates the Ad Database 8013. Specifically, the IVR creates a new record in the AD\_RESPONSE table FIG. 4 and populates the fields RSP\_MAILBOX\_NUMBER 501, RSP\_DATE\_TIME 503, RSP\_TYPE 504, and RSP\_FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IVR. The field RSP\_TYPE 504 is set to VOX to indicate that the audio recording is in the Dialogic .VOX file format. Finally, the field RSP\_CONVERSION\_FLAG 506 is set to FALSE to indicate that the audio must be converted from the Dialogic .VOX format to create a new audio file in the RealAudio .RA format for playback on the Internet.

The IVR creates a new RealAudio .RA file from Dialogic .VOX file and stores the RealAudio file to a disk file on the IWS and updates the Ad Database. Specifically, the IVR creates a new record in the AD\_RESPONSE table FIG. 4 and populates the fields RSP\_MAILBOX\_NUMBER 501, RSP\_DATE\_TIME 503, RSP\_TYPE 504, and RSP\_FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IVR. The field RSP\_TYPE 504 is set to RA to indicate that the audio recording is in the RealAudio .RA file format.

Finally, the field RSP\_CONVERSION\_FLAG 506 is set to TRUE

Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE for both the audiotext .VOX file and the RealAudio .RA file to indicate that the audio files do not need to be converted.

If there are additional matches, the caller is returned to block 8009. Otherwise, the call is terminated 8015.

### ADVERTISER MATCHING VIA THE INTERNET

An exemplary operation of the system, with regard to a specific advertiser retrieving her matches via the Internet will now be treated to accomplish the process as indicated in FIG. 9. First, suppose an advertiser at terminal CT1 connects to the Internet to find existing ads that match her profile. The assumed advertiser connects to the Internet and inputs a Uniform Reference Locator URL, for example: [http://www.personal\\_ads.com](http://www.personal_ads.com), resulting in a connection from the remote terminal CT1 to a Home Page 9001 on the Internet Web Server.

Referring to FIG. 9., from the Home Page 9001 on the Internet Web Server, the Internet user selects a Match Form 9002. The Match Form 9002 instructs the advertiser to enter a mailbox number 9003 and password 9004. The IWS then queries the Ad Database to determine if the mailbox number and password are valid 9005. If the entries are not valid, the Internet user is presented with an Invalid Mailbox and Password Form 9006. If the entries are valid, the IWS queries the Ad Database 9007 to find existing ads whose profile matches that of the advertiser.

If the query does not find any matching ads, the advertiser is presented with a No Matches Page 9009. If the query finds one or more matching ads, the IWS presents the advertiser with a Results Form 9010. The Results Form 9010 shows the matching ads. Specifically, the Results Form shows the twenty word text ad that appears in the newspaper 9011. In addition, each ad contains one or more icons that represent any additional text or multimedia files (audio, video, photograph) for the ads that are available on the IWS. These icons include an audio icon 9012 to denote the ad's audio greeting, a still camera icon 9013 to denote a photograph of the advertiser, a video camera icon 9014 to denote a video clip of the advertiser, or a paper icon 9015 to denote the ad's full text greeting, if the ad was placed on the Internet. It is to be understood that these icons are merely representative and that many other possibilities exist to denote the existence of text and multimedia files. By clicking on an icon, the Internet user can view or listen to the associated file. In addition, by selecting a maximize bar 9016, the Internet user can expand the ad to a full page size FIG. 14.

The Internet user responds to an ad by selecting the "Respond" button 9017. When the Internet user selects the respond button, she is presented with an Ad Response Form 9018. The Internet user creates a response by typing in a response text field 9019. After completing the Ad Response Form, the Internet user submits the form by pressing the "Submit" button 9020. The advertiser is then presented with a Response Confirmation Form 9021. The Response Confirmation Form gives the advertiser information on enhancing her response with an audio message, photograph, or video clip.

The IWS then stores the response to a disk file and updates the Ad Database 9022. Specifically, the IWS creates a new record in the AD\_ RESPONSE table FIG. 4 and then populates the fields RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IWS. The field RSP\_ TYPE 504 is set to TEXT. Finally, the field RSP\_ FILENAME 505 is set to the location of the response file on the IWS.

the field `CONVERSION_FLAG` 506 is set to `TRUE`. Finally, the field `CONVERSION_FLAG` 506 is set to `TRUE` to indicate that the text does not need to be converted to a different format.

The Internet user can return to the Results Form by using the "Back" key on her browser.

### REVIEWING AND SUMMARIZING ADS

All new personal ads are reviewed by an operator at an Operator Workstation to insure that their content is appropriate. Also, each greeting submitted by an advertiser, whether it be an audio greeting recorded by an advertiser via a telephone or a text greeting placed by an advertiser via the Internet, is summarized by an operator to create a twenty word classified text ad for publication in a newspaper. The twenty word limit is a function of newspaper imposed space limitations. It should be noted that space limitations, if they exist at all, may vary widely from newspaper to newspaper. In another format, text ads that are published in the newspaper are first placed with a live operator via a telephone, precluding the need to summarize an audio recording.

An exemplary operation of the process of reviewing and summarizing ads with regard to a specific operator at OW1 will now be treated to accomplish the process as indicated in FIG. 10. The operator first queries the Ad Database to determine if there are new ads to review 1800. Specifically, the query looks for all ads in the `AD_PERSONAL` table FIG. 2 where the field `AD_REVIEW_FLAG` 210 is set to `FALSE`. If the query finds a new ad, the operator first reviews the ad's greeting 1801 as found in the `AD_GREETINGS` table FIG. 3. If the ad was placed via telephone, this consists of listening to the ad's audio greeting. If the ad was placed via the Internet, this consists of reading the text greeting. The operator then determines if the greeting's contents are appropriate 1802. If the greeting's contents are inappropriate, the ad is deleted and the record purged from the Ad Database 1803 and the operator is returned to block 1800. If the greeting's contents are appropriate, the operator writes a twenty word summary of the greeting 1804. The operator then queries the Ad Database to determine if the advertiser recorded an e-mail address 1805. If an e-mail address audio recording is found, the operator transcribes the e-mail address 1806. The operator then updates the Ad Database 1807.

Specifically, the advertiser's twenty word text summary is stored to a disk file on the IWS. The `AD_REVIEW_FLAG` 210 in the `AD_PERSONAL` table FIG. 2 is set to `TRUE` indicating that the ad has been reviewed. In addition, a new record for the text summary is created in the `AD_GREETINGS` table FIG. 3 and the field `GR_REVIEW_FLAG` 303 set to `TRUE` indicating that the record has been reviewed. In the new record, the fields `GR_MAILBOX_NUMBER` 301, `GR_TYPE` 302, `GR_FILENAME` 304, `GR_DATE_TIME` 305 in the table `AD_GREETINGS` FIG. 3 are also populated to indicate the advertiser's mailbox number, the file format, and the location of the text file on the IWS, and the date and time. The field `GR_TYPE` is set to `TEXT`. Finally, the field `GR_CONVERSION_FLAG` 306 is set to `TRUE` to indicate that the text does not need to be converted to a different format.

The operator then returns to block 1800 to continue processing ads. If no new ads are found, the operator queries the Ad Database to determine if any multimedia files (audio, video, or photo) have been submitted via the Internet to enhance a personal ad 1808. Specifically, the query looks for all ads in the `AD_PERSONAL` table

FIG. 2 where the field AD\_ REVIEW\_ FLAG 210 is set to TRUE that has files in the AD\_ GREETING\_ TABLE FIG. 3 where the GR\_ REVIEW\_ FLAG 303 is set to FALSE. If the query finds a multimedia file, the operator first reviews the file 1809. If it is an audio file, this consists of listening to the ad's audio greeting. If it is a video or graphic file, this consists of viewing the file. The operator then determines if the greeting's contents are appropriate 1810. If the greeting's contents are inappropriate, the file is deleted and the record purged from the Ad Database 1811. The operator is then returned to block 1808 to continue processing multimedia files. If the file's contents are appropriate, the operator approves the file 1812 and updates the Ad Database 1813. Specifically, this consists in setting the field GR\_ REVIEW\_ FLAG 303 to TRUE to indicate that the file has been reviewed.

If the file is an audio file, the Operator Workstation converts the file to create a new RealAudio RA file and stores the file on the IWS. The Operator Workstation also converts the file to create a Dialogic VOX file and stores the file on the IVR. For each new audio file, a new record is created in the AD\_ GREETINGS table-FIG. 3 and the fields GR\_ MAILBOX\_ NUMBER 301, GR\_ TYPE 302, GR\_ DATE\_ TIME 305, and GR\_ FILENAME 304 are populated to indicate the mailbox number of the advertiser, the format of the file, the date and time, and the location of the audio file on the IVR. Also, the field GR\_ REVIEW\_ FLAG 303 is set to TRUE to indicate that the file has been reviewed. Finally, the field GR\_ CONVERSION\_ FLAG is set to TRUE to indicate that the audio file does not need to be converted.

If the file is a video file, the Operator Workstation converts the Microsoft AVI file to create a new VDOLive file and stores the file on the IWS. Also, a new record is created in the AD\_ GREETINGS table FIG. 3 and the fields GR\_ MAILBOX\_ NUMBER 301, GR\_ TYPE 302, GR\_ DATE\_ TIME 305, and GR\_ FILENAME 304 are populated to indicate the mailbox number of the advertiser, the format of the file, the date and time, and the location of the video file on the IVR. Also, the field GR\_ REVIEW\_ FLAG 303 is set to TRUE to indicate that the file has been reviewed. Finally, the field GR\_ CONVERSION\_ FLAG 306 is set to TRUE to indicate that the video file does not need to be converted.

The operator then returns to block 1808 to continue processing multimedia files. If no new multimedia files are found, the session is terminated 1814.

#### PUBLISHING ADS IN THE NEWSPAPER

Each week, all the twenty-word summary text ads from personal ads submitted via telephone and via the Internet are published in a newspaper along with their five digit mailbox numbers. FIG. 11 depicts personal ads as they would appear in the local newspaper. Icons are included in each ad that represent the origin of an ad (via telephone or via the Internet) and what additional information or multimedia, if any, is available on the Internet. For example, an ad placed via the telephone contains a telephone icon 2001; an ad placed via the Internet contains a computer icon 2002. If there is additional text on the Internet, an ad contains an icon denoting additional text 2003. The presence of a photo or video clip is indicated respectively by a still camera 2004 and video camera 2005 icons.

## RESPONDING TO AN AD THROUGH A TELEPHONE

An exemplary operation of the system, with regard to a telephone caller responding to a personal advertisement will now be treated to accomplish the process as indicated in FIG. 12. First, suppose a telephone caller at terminal T1 places a call to respond to a personal ad advertised in XYZ newspaper. The assumed call involves the telephone caller actuating the buttons to input the number 1 900 777 3333, for example. As a result, signals are provided to the public telephone network resulting in a connection from the remote terminal T1 to the IVR. Using standard DNIS techniques, the IVR associates the called number 1 900 777 3333 with a specific format, for example, a voice personals response format.

Referring to FIG. 12, upon receiving a call, the IVR sets the "invalid mailbox number count" equal to zero 2301. The IVR then increments the "invalid mailbox number count" by one 2302 and cues the caller for a mailbox number 2303. Upon the caller entering a mailbox number, the IVR queries the field AD\_ MAILBOX\_ NUMBER 201 to determine if the mailbox number is valid 2304. If the mailbox number is invalid, the IVR determines if the caller has exceeded the maximum number of attempts allowed 2305. If the caller has exceeded the maximum number of attempts allowed, the call is terminated 2306. If the maximum number of attempts allowed has not been exceeded, the IVR increments the "invalid mailbox number count" by one 2302 and again cues the caller for a mailbox number 2303.

If the mailbox number is valid, the IVR queries the field AD\_ ORIGIN 211 to determine if the ad originated on the Internet 2307. If the ad originated on the telephone, the IVR plays the ad's audio greeting 2311. If the ad originated on the Internet, the IVR uses text to speech to play the ad's text greeting as placed on the Internet 2308. The IVR then queries the AD\_ GREETINGS table FIG. 2 to determine if the Internet advertiser also submitted an audio greeting 2309. If the query does not find an audio greeting 2310, the IVR prompts the caller to indicate if he wishes to respond to the ad 2312. If the query finds an audio greetings 2310, the IVR plays the audio greetings 2311. The IVR then prompts the caller to indicate if he wishes to respond to the ad 2312.

If the caller elects not to respond to the ad, he is given the option of having the IVR find other ads that are similar to the one he just listened to 2325. If the caller elects to respond to the ad, the IVR first cues him to record his response 2319. The IVR then stores the response to a disk file 2320 and updates the Ad Database 2321. Specifically, the IVR creates a new record in the AD\_ RESPONSE table FIG. 4 populates the fields RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IVR. The field RSP\_ TYPE 504 is set to VOX to indicate that the audio recording is in the Dialogic .VOX file format. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to FALSE to indicate that the audio must be converted from the Dialogic .VOX format to create a new audio file in the RealAudio .RA format for playback on the Internet.

The IVR also creates a new RealAudio .RA file from Dialogic .VOX file and stores the RealAudio file to a disk file on the IWS. Specifically, the IVR creates a new record in the AD\_ RESPONSE table FIG. 4 and populates the fields RSP\_ MAIL BOX

RESPONSE FORM 2402 and populates the fields RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IVR. The field RSP\_ TYPE 504 is set to RA to indicate that the audio recording is in the RealAudio .RA file format. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE for both the audiotext .VOX file and the RealAudio .RA file to indicate that the audio files do not need to be converted.

In addition, the mailbox number of the personal ad responded to is placed in a notification queue 2322, together with delivery information corresponding to the ad, so that the advertiser can be notified that a response has been left for her ad. The delivery information includes the telephone number and e-mail address, if available, of the advertiser to be notified.

The caller is then asked if he wants the IVR to automatically find other ads that are similar to the one he just responded to 2325. If the caller declines this option, the call is terminated 2326.

### RESPONSE MATCHING VIA TELEPHONE

If the caller chooses to have the IVR find other matching ads, the IVR queries the Ad Database to find other ads that are similar to the ad selected by the caller. Specifically, an ad is deemed to be similar if the age in the ad's profile is within five years of the profile of the ad selected by the caller and if the ads have the same gender and marital status. It is to be understood that the criteria used to determine a similar ad could vary greatly in kind and quantity.

If the query does not find any matches, the call is terminated 2320. If the query returns a match, the caller is returned to block 2307 for processing.

### RESPONDING TO AN AD THROUGH THE INTERNET

An exemplary operation of the system, with regard to a specific Internet user responding to a personal ad via the Internet will now be treated to accomplish the process as indicated in FIG. 13.

First, suppose an advertiser at terminal CT1 connects to the Internet to respond to a personal advertisement advertised in XYZ newspaper. The assumed Internet user connects to the Internet and inputs a Uniform Reference Locator URL, for example: [http://www.personal\\_ads.com](http://www.personal_ads.com), resulting in a connection from the remote terminal CT1 to a Home Page on the Internet Web Server.

Referring to FIG. 13, from the Home Page 2401 on the IWS, the Internet user selects an Ad Response Form 2402. The Ad Response Form instructs the Internet user to enter the five digit mailbox number of the ad she wishes to respond to 2403. Upon the Internet user entering her mailbox number, the IWS queries the field AD\_ MAILBOX\_ NUMBER in the Ad Database to determine if the mailbox number is valid 2404. If the mailbox number is invalid, the Internet user is presented with an Invalid Mailbox Number Form 2405.

If the mailbox number is valid, the IWS presents the Internet user with a Results Form 2406. The Results Form 2406 shows the ad the Internet user selected. Specifically, the Results Form shows the twenty word text ad that appears in the newspaper 2407. In addition, the ad contains one or more icons that represent any additional text or multimedia files (audio, video, photograph) for the ad that are available on the IWS and a link to other ads that match the ad to

available on the IWS and a link to other ads that match the ad to which the Internet user is responding. These icons include an audio icon 2408 to denote the ad's audio greeting, a still camera icon 2409 to denote a photograph of the advertiser, a video camera icon 2410 to denote a video clip of the advertiser, a paper icon 2411 to denote the ad's full text greeting, if the ad was placed on the Internet and a "matching" icon to denote that the IWS has identified other ads that are similar to the one being responded to 2415. It is to be understood that these icons are merely representative and that many other possibilities exist to denote the existence of text and multimedia files. By clicking on an icon, the Internet user can view or listen to the associated file. In addition, by selecting a maximize bar 2412, the Internet user can expand an ad to full page size FIG. 14. The Internet user responds to an ad by selecting the "Respond" button 2413.

When the Internet user selects the respond button, she is presented with an Ad Response Form 2414. The Internet user creates a response by completing a response text field 2416. After completing the Ad Response Form, the Internet user submits the form by pressing the "Submit" button 2422. The advertiser is then presented with a Response Confirmation Form 2423 which is illustrated in FIG. 15. The Response Confirmation Form gives the advertiser information on enhancing her response with an audio message, photograph, or video clip.

The IWS then stores the response to a disk file and updates the Ad Database 2424. Specifically, the IWS creates a new record in the AD\_RESPONSE table FIG. 4 and populates the fields RSP\_MAILBOX\_NUMBER 501, RSP\_DATE\_TIME 503, RSP\_TYPE 504, and RSP\_FILENAME 505 to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the response, and the location of the response file on the IWS. The field RSP\_TYPE 504 is set to TEXT. Finally, the field RSP\_CONVERSION\_FLAG 506 is set to TRUE to indicate that the text does not need to be converted to a different format.

In addition, the mailbox number of the personal ad responded to is placed in a notification queue 2425, together with delivery information corresponding to the ad, so that the advertiser can be notified that a response has been left for her ad. The delivery information includes the telephone number and e-mail address, if available, of the advertiser to be notified.

#### ENHANCING A RESPONSE WITH AUDIO, PHOTOGRAPH AND VIDEO

As already indicated, after a text response has been submitted via the Internet, the Internet user is shown a Response Confirmation Form FIG. 15 1501. The response confirmation form gives the Internet user instructions on how to enhance a response to an ad with audio, video, or a photograph.

A more detailed explanation of how a respondent submits an audio response, photograph, or video clip via CT1 will now be given. To submit an audio response, the Internet user first makes an audio recording using a WAV file editor and then saves the file 1503, for example: response.wav. The Internet user then submits the audio file using e-mail to the recipient's electronic mailbox on the IWS 1504, for example: 22345@personals.com 1512. The Internet user's audio response is stored to a disk file on the IWS and the Ad Database is updated 1505.

Specifically, the IVR creates a new record in the AD\_RESPONSE table FIG. 4 and populates the fields RSP\_MAILBOX\_NUMBER

501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 506 to indicate the mailbox number of the ad responded to, the date of the response, the format of the audio file, and the location of the audio file on the IVR. The field RSP\_ TYPE 504 is set to WAV to indicate that the audio recording is in the Microsoft .WAV file format. Also, the field RSP\_ CONVERSION\_ FLAG 506 is set to FALSE to indicate that the audio file must be converted from the Microsoft .WAV format to create two new audio response files: one in the RealAudio .RA format for playback on the Internet, and another in the Dialogic VOX format for playback via the telephone.

The IWS determines if conversion of audio files is needed 1506, and then creates a new RealAudio .RA file and Dialogic .VOX file from the Microsoft .WAV file 1507. The RealAudio file is stored on the IWS and the Dialogic file is stored on the IVR. The IWS also updates the Ad Database 1508. Specifically, for each new audio file, the IWS creates a new record in the AD\_ RESPONSE table FIG. 4 and populates the fields RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date of the response, the format of the response, and the location of the response file on the IWS. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE for both the source audio file (.WAV) and the target audio files (.VOX and .RA) to indicate that the audio files do not need to be converted 1509.

To send a photograph in response to an ad, the Internet users first digitizes a photograph using a scanner or takes a photograph with a digital camera and then saves the image to a .GIF file, for example: response.gif. The respondent then submits the graphic file using e-mail to the recipient's electronic mailbox, for example: 22345@personals.com 1504. The respondent's photo is stored to a disk file on the IWS and the Ad Database is updated 1505.

Specifically, the IWS creates a new record in the AD\_ RESPONSE table FIG. 4 and populates the RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date of the response, the file format of the photograph, and the location of the file on the IWS. The field RSP\_ TYPE 504 is set to GIF to indicate that the graphic file is in the .GIF file format. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE to indicate that no file conversion is necessary as .GIF is the graphic file format used by the IWS 1506. It should be noted that file conversion may or may not be necessary depending on what file formats are supported by the IWS and IVR and in which formats the system allows users to submit files.

To send an advertiser a video clip, the Internet user first digitizes a video clip and then saves the image to a Microsoft .AVI file 1510, for example: 44567.avi. Other video formats such as Apple Quicktime, or MPEG video could also be used. The respondent then submits the graphic file using e-mail to the recipient's electronic mailbox, for example: 22345@personals.com 1504. The respondent's video is stored to a disk file on the IWS and the Ad Database is updated 1505.

Specifically, the IVR creates a new record in the AD\_ RESPONSE table FIG. 4 and populates the fields RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 to indicate the mailbox number of the ad responded to, the date of the response, the file format of the video clip, and the location of the video file on the IWS. Specifically, the field RSP\_ TYPE 504 is set to AVI to indicate that the video clip is in the .AVI file format. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE to indicate that no file conversion is necessary as .AVI is the video file format used by the IWS 1506. It should be noted that file conversion may or may not be necessary depending on what file formats are supported by the IWS and IVR and in which formats the system allows users to submit files.



location of the video file on the IWS. Specifically, the field RSP\_ TYPE 504 is set to AVI to indicate that the audio recording is in the Microsoft .AVI file format. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to FALSE to indicate that the VDOLive file must be converted to the VDOLive format for real time playback on the Internet.

The IWS determines that the video file must be converted to VDOLive format 1506. The IWS creates a new VDOLive file from the Microsoft .AVI file and stores the new file to a disk file 1507 on the IWS and updates the Ad Database 1508. A new record in the AD\_ RESPONSE table FIG. 4 is created and the IWS populates the RSP\_ MAILBOX\_ NUMBER 501, RSP\_ DATE\_ TIME 503, RSP\_ TYPE 504, and RSP\_ FILENAME 505 fields to indicate the mailbox number of the ad responded to, the date and time of the response, the format of the video file, and the location of the video file on the IWS. Finally, the field RSP\_ CONVERSION\_ FLAG 506 is set to TRUE for both record formats (AVI and VDOLive) in the Ad Database to indicate that the video files does not need to be converted 1509.

#### RESPONSE MATCHING VIA THE INTERNET

As previously indicated, if the user selects the matching option 2415 in FIG. 13, the IWS queries the Ad Database to find other ads that are similar to the ad selected by the caller. Specifically, an ad is deemed to be similar if the age in the ad's profile is within five years of the profile of the ad selected by the caller and if the ads have the same gender and marital status. Its is to be understood that the criteria used to determine a similar ad could vary greatly in kind and quantity.

#### NOTIFYING AN ADVERTISER OF A RESPONSE

FIG. 16 illustrates the notification routine that processes the records placed in the notification queue in step 2322 of FIG. 12 and step 2425 of FIG. 13. In step 3001, the DBS scans the notification queue to determine if any notifications are scheduled to be made at the present time. As previously described, each notification record includes the telephone number and e-mail address, if available, of the advertiser to be notified. In step 3003, the DBS scans the notification record for an e-mail address. If an e-mail address is present, the DBS sends the record to the IWS 3004. In step 3005, the IWS sends an e-mail message to the advertiser informing him that a response has been made to his ad. The e-mail message includes a link that can be followed to the actual response for those retrieving their e-mail via a browser. Step 3006 sends the record to the IVR. In step 3007, the IVR dials an advertiser's telephone number contained in the callback record and waits for a response. If a voice response is not received, then the IVR sends a corresponding message to the DBS. The DBS then marks the time of the attempted callback in the notification queue record, so that a set period of time can be established between callback attempts. Note could also be made if an e-mail message had been sent to avoid sending duplicate notifications. If a voice response is received 3008, then in step 3009, then the IVR sends a voice message informing the advertiser that a response has been made to his ad. The voice message also gives a telephone number and Internet address that can be used to retrieve the response. It may be desirable in certain applications to prompt the person who answers the telephone for a password and mailbox number to verify their

identity. Also, it may be desirable to actually allow the person to listen to the response during the call.

#### RETRIEVING RESPONSES THROUGH A TELEPHONE

An exemplary operation of the system, with regard to an advertiser retrieving responses to his personal ad will now be treated to accomplish the process as indicated in FIG. 17. First, suppose an advertiser at terminal T1 places a call to retrieve messages left in response to his ad. The assumed call involves the advertiser actuating the buttons to input the number 1 900 777 4444, for example. As a result, signals are provided to the public telephone network resulting in a connection from the remote terminal T1 to the IVR. Using standard DNIS techniques, the IVR associates the called number 1 900 777 4444 with a specific format, for example, a message retrieval format.

Referring to FIG. 17, upon receiving a call, the IVR sets the "logon attempts" equal to zero 2501. The IVR then increments the "logon attempts" by one 2502 and cues the caller for a mailbox number 2508 and password 2503. The IVR then queries the Ad Database to determine if the mailbox number and password are valid. If the entries are not valid, the IVR determines if the caller has exceeded the maximum number of logon attempts allowed 2505. If the caller has exceeded the maximum number of logon attempts allowed, the call is terminated 2506. If the maximum number of logon attempts allowed has not been exceeded, the IVR increments the "logon attempts" by one 2502 and again cues the caller for a mailbox number and password 2503.

If the entries are valid, the IVR then queries the AD\_RESPONSE table to determine if the advertiser has any responses 2507. If the advertiser has no responses, the call is terminated 2506. If the IVR finds a response, the IVR plays the text 2513 and audio 2514 messages from the respondent. If a response is in text form, the IVR uses text to speech to play the message. If there are additional responses, the caller is returned to block 2513. Otherwise, the call is terminated 2506.

#### RETRIEVING MESSAGES THROUGH THE INTERNET

An exemplary operation of the system, with regard to an advertiser retrieving her messages via the Internet will now be treated to accomplish the process as indicated in FIG. 18. First, suppose an advertiser at terminal CT1 connects to the Internet to retrieve messages. The assumed Internet user connects to the Internet and inputs a Uniform Reference Locator URL, for example: [http://www.personal\\_ads.com](http://www.personal_ads.com), resulting in a connection from the remote terminal CT1 to a Home Page 1701 on the Internet Web Server.

Referring to FIG. 18, from the Home Page 1701 on the Internet Web Server, the advertiser selects a Message Retrieval Form 1702. The Message Retrieval Form 1702 instructs the advertiser to enter a mailbox number 1703 and password 1704. The IWS then queries the Ad Database to determine if the mailbox number and password are valid 1705. If the entries are not valid, the Internet user is presented with an Invalid Mailbox and Password Form 1706. If the entries are valid 1705, the IWS queries the Ad Database 1707 to find responses to the advertiser's ad.

If there are no responses, the IWS presents the advertiser with a No Responses Form 1709. If the IWS finds one or more responses, the IWS presents the advertiser with a Personal Ad Messages Form 1710. The Personal Ad Messages Form 1710 shows any messages

for the advertiser. Each message shows the date 1712 and time 1713 the message was received and contains one or more icons that represent the contents of the message. A text icon 1714 denotes a text message; an audio icon 1715 denotes an audio message; a still camera icon 1716 denotes a photograph; a video camera icon 1717 denotes a video clip. By clicking on an icon, the advertiser can view or listen to the associated file.

Foreign References: **none**

(No patents reference this one)

Other Abstract Info: DERABS G2000-038329 DERABS G2000-038329

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